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2 July 1984

# Worldwide Report

TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

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## FIRM OFFERS RANGE OF SATELLITE EARTH STATION CATEGORIES

Canberra THE AUSTRALIAN in English 14 May 84 p 11

[Text]

**LEADING** telecommunications company, NEC Australia, would provide a range of earth station categories to meet the whole spectrum required by Aus-sat users.

The company last week said because the communications satellite had a relatively short lifetime of seven to 10 years, the technology related to the operation and maintenance of earth stations changed quickly and progressed in step with the technology of new satellites.

Under the circumstances, organisations would need the continuous support of a qualified supplier, who should have total supply capability and positive research and development operations in every earth station equipment field.

NEC, a member of the Australian Electronics Industry Association, said organisations wishing to access satellite communications could connect into the AUS-SAT major-city earth stations, could use Telecom earth stations, or could operate earth stations independently by establishing a private network.

A private network offered three major benefits:

**THE** point-to-point nature of satellite systems combined with private ownership provided a very high level of reliability.

**THERE** was flexibility as systems could be reconfigured very quickly compared with alternative communications systems.

**AND** it is cost effective for many users.

The manager of NEC's satellite marketing department, Mr Mike Johannessen, said: "NEC recognises the complexities facing corporate users. Furthermore, most of these corporations will have a very limited capability to undertake system design, procure, install and commission satellite communication systems. They will require continuous support."

To this end, he said, NEC had already begun to gear itself to service this market in Australia, using experience gained in providing over 800 earth stations world-wide

### Long-term

The company would be establishing manufacturing and repair facilities at its Mulgrave factory. NEC's plans for providing maintenance for its users included support for at least 10 years after supply of the equipment.

"We recognise an earth station represents a long-term investment in which the supplier should play a continuing role," Mr Johannessen said.

NEC's earth stations will have antenna diameters of between two and five metres and will be from \$30,000 up.

A typical user could be an insurance company with offices located around the country. All offices could then be interconnected, enabling voice and data communications between centres.

Larger stations costing more than \$100,000 would be

the hub of perhaps 10 to 100 smaller stations and Telecom would fall into this category.

Earth stations for reception of ABC television in remote areas through Homestead and Community Broadcast Satellite Services (HACBSS) would cost between \$1000 and \$2000.

As part of the AUSSAT program, NEC is now manufacturing the equipment for 66 Telecom earth stations, Aussat minor earth stations and 101 Department of Aviation Aeronautical Service Stations.

CSO: 5500/4388

## NATIONWIDE AUTOMATIC MOBILE TELEPHONE SYSTEM INSTALLED

Kuala Lumpur BUSINESS TIMES in English 25 May 84 p 2

[Article by Vong Nyam Ming]

[Text]

STARTING December, Malaysia will be the first country in Asia to have a nationwide completely automatic mobile telephone system covering vehicles and other subscribers in remote rural areas.

An Ericsson Nordic cellular mobile system is now being installed for Telecoms Malaysia at a cost of \$54 million, said Mr Jan Stenberg, corporate executive and vice president of the multinational Ericsson group.

Mr Stenberg said this in Singapore where he is heading a 50-man Ericsson team at the region's premier telecommunications showcase, Comunicasia and Infotech Asia.

Initially, the cellular radio system will be able to serve 10,000 mobile subscribers in Peninsular Malaysia, Sabah and Sarawak.

In the first phase, the system has 86 radio base stations with 954 radio channels and five AXE 10 exchanges — Ericsson's top of the line SPC public switching system.

The first of the base stations in Kuala Lumpur is expected to be completed in December.

Like the new type of intelligent car radio which hops to the station of strongest transmission, cellular radio equipment will be switched by the nearest base station.

Mr Stenberg claimed that Ericsson's AXE digital exchange was the most modern telephone switching system in the world market and had been specified by 50 countries.

"The AXE system makes it possible for a mobile subscriber to use his phone in exactly the same easy way as he uses his office or home phone.

"In the US, cities like Chicago, Detroit and Buffalo will soon have a similar system," he said.

He described last year's order from the UK for a system as the largest ever for cellular radio equipment.

"In Africa, the Ministry of Communications of Tunisia has placed an order for a system as a first step in developing a

nationwide mobile telephone network.

"In 1981, the four Nordic countries, Denmark, Norway, Finland and Sweden, put into service a unique cellular mobile telephone system enabling motorists and other mobile telephone users to keep in touch with the close to 500 million telephone subscribers in the world," he said.

Ericsson's sales last year totalled US\$3 billion and worldwide the group employs 70,000 people.

Bernama adds that the Telecoms Department will expand its international subscriber dialling service in Sabah when the computerised telephone exchange is completely installed in the state.

The department is also introducing the datel and telefax systems to subscribers, especially businessmen with international connections, the Sabah Telecoms Deputy Director, Encik Yusof Awang Kecil, said in Kota Kinabalu yesterday.

Speaking over TV Sabah in the *Current Affairs in Sabah* programme, he said that in line with the rapid progress in telecommunications technology, his department was training the staff so as to be prepared for the changes.

He said that a fully-equipped telecoms training centre was being set up in Menggatal, 15 km from Kota Kinabalu, and it is expected to be completed soon.

The school would be able to produce professional and capable staff able to face the challenges in their chosen fields, Encik Yusof added.

He said that apart from technical faults, vandals often destroyed public telephones.

Encik Yusof said that his department took a serious view on this matter and those found damaging the cables and property of the department would have to pay for the cost of repair, failing which legal action would be taken.

CANADA

BRIEFS

NORTHERN TELECOM 1984 R&D--Northern Telecon will this year spend nearly 400 million Canadian dollars, or approximately 9 percent of its consolidated earnings, on research and development activities. That is the same investment percentage as was approved for research and development by the Canadian firm in 1983 (\$310 million). In 1982 those expenditures totaled \$241 million. [Text] [Paris ELECTRONIQUE ACTUALITES in French 18 May 84 p 15] 6145

CSO: 5500/2698

## DEVELOPMENT OF POLICE, ADMINISTRATIVE COMMUNICATIONS SYSTEMS

### MORAD Radiotelephone System

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 9, 5 May 84  
pp 32-33

[Article by Augustyn Glowacki: "Opole Communications System With Gminas"]

[Text] Effective management and direction of the totality of voivodship affairs can be provided only if there is an accurate, rapid means of transmitting information. It is essential to have adequate communications between the voivodship office and the lower-level agencies and the enterprises in the field to this end.

Shortly after the system of administrative division was revised in 1975, a decision was made in Opole Voivodship to expand and modernize the existing radiotelephone communications system and to set up an intravoivodship TELEX and telephone communications system. At the instigation of the voivodship's political-administrative officials, a group of specialists directed by deputy commandant Lt Kazimierz Falkowski was created within the voivodship internal affairs office in Opole. This group developed a UHF communications system called MORAD (the name is an acronym for Milicja Obywatelska i Radio) and a system of TELEX and intravoivodship telephone communications. The group also developed technical documentation for this equipment and prototypes of this equipment on its own.

### MORAD System

On the basis of several years' practical experience we can say that the UHF MORAD radio communications access system is the most useful both in daily work and in exceptional situations. Two radiotelephone networks operate under this system, one working between the voivodship office and the subordinate units and the other between the voivodship office and the institutions and places of employment. Within each of these networks there is a base station located in the voivodship office and stationary field stations in the various units in the field, throughout the voivodship.

All the central station equipment is located in an office, which makes it possible to install a station in any office facility.

The Voivodship Office's radio communications is adapted for radio-line connections. This applies to telephone center subscribers connected to a central station position (six units). All subscribers connected to these centers can be connected to all radio-subscribers operating in the network and vice versa. In certain instances there can also be radio-line hookups with center subscribers out in the field.

Besides the above-mentioned centers (exchanges), 20 telephone subscribers are directly connected to the dispatcher positions. By lifting the microphone of their equipment, these subscribers are connected with the central station and can be quickly hooked up to the desired radio-subscriber.

#### Telegraph Communications

The command position of the voivodship governor is equipped with three teletypewriters connected to the automatic telephone center (exchange) in the voivodship telecommunications office. These teletypes make it possible to maintain constant telegraphic communication in the national network.

To insure radiotelephone communications access with lower-level units, a system of teletype communications operating by radio was introduced. This system operates on the basis of an existing, well-functioning radiotelephone communications system and permits teletype operation by radio with the possibility of directional connections, and also the setting up of circulars to a few, a dozen or more, or all radio-subscribers. These teletype machines are connected using special telegraphic translation to radiotelephones already in operation in the gmina offices. The only condition to the proper functioning of telex connections is maintaining top efficiency of radiotelephone connections and properly using them.

#### Telephone Communications

In order to insure uninterrupted secure communications with lower units, places of employment, and institutions in the field of the voivodship, the telex and radiotelephone communications systems have been duplicated with a separate dispatcher telephone communications network.

A 600-number Pentacont telephone exchange has been installed in the voivodship office. Of these 600 number, 400 are used for internal communications in the voivodship office building, leaving 200 for intravoivodship telephone communications. Some 140 subscribers have been hooked up to the numbers allocated. These 140 are managerial positions in the voivodship enterprises and institutions within Opole. Twelve Pentacont 50-number telephone exchanges have also been hooked up. They are located in city offices and some offices of the gminas and towns. Connected to the field exchanges are lower-level units, places of employment, PGR complexes and institutions with headquarters in these administrative units. Connections in this network can be made automatically in both directions.

The radio equipment employed in these networks is easy to operate and simple to use. The work in the voivodship office's radio networks uses the duo simplex system with two frequencies on one channel.

The MORAD system is a closed radiocommunication network conference-access system, composed of a central station and radio-subscriber stations grouped on a single radio channel. The center has a maximum capacity of 80 radio subscribers.

In the MORAD system work is guided and controlled by a central station which can cooperate with six telephone centers. All links between subscribers and between radio subscribers and subscribers of the telephone network are made through the central switchboard. The radio-subscriber station is equipped with four speaking sets, that is, the intermediate apparatus and three terminal apparatus sets. This makes it possible to avoid having to call functionaries to the telephone.

The tape recorders with which the radio-subscriber stations are equipped can be used in a remote-control mode with a signal from the central station. In similar fashion the other equipment, such as alarms in the field of the voivodship, can also be used in a remote-control mode. The system's additional equipment consists of radiotelephone translators which allow for radio teletype.

With the intermediary of the radio center, this system makes the following connections possible:

between gmina offices and places of employment included in the radio network, for joint radioconference,

radioconferences in the various networks,

branch radioconference (according to plant specialization),

between two radio-subscribers in a network of plants or in the gmina network,

between a radio-subscriber of the plant radio center and a radio-subscriber of the gmina office network,

between the radio center and one radio-subscriber,

between a stationary radio-subscriber and a radio truck,

between one radio truck and another,

between the radio center and telephone centers (six units).

In addition, this sort of equipment provides easier contacts between radio-subscribers, makes it easier to use radio communications, reduces the time a channel is in use, expands radio communications use, safeguards the privacy of conversations vis-a-vis radio-subscribers not taking part in the transmission.

Circuits to subscribers within the town of Opole as well as interurban lines have been guaranteed by the voivodship telecommunications office in Opole.

All the places of employment and institutions in Opole Voivodship who expressed agreement for the use of this type of communications have shared the costs of setting up these communications systems.

In assessing the suitability of the existing communications systems in Opole Voivodship, we should state that beyond all doubt the systems provide for a very rapid transmission of information, and therefore they greatly improve the process of running and administering the voivodship.

Our communications systems are used not only by the voivodship office but also by the voivodship committee of the PZPR, the voivodship administration of ZSMP, and the Voivodship Union of Farm Cooperatives, which set up weekly radioconferences with their units in the field. The state grain plans and other economic units also make daily use of the communications system. On average there are about 300 radio links made each day.

The fact that the implementation of radio communications has meant a reduction in telephone charges amounting to about 50 percent is not insignificant.

Given merely the virtues mentioned above by way of example, it would seem that the existing voivodship office communications system in Opole could be used successfully in the other voivodship offices.

In writing about these undoubted pluses, we should emphasize the difficulties which the Budget-Economics Department is facing every day in dealing with the problem of keeping the communications systems mentioned above in action.

Many millions of zlotys were spent to accumulate electronic equipment which must be continually maintained by high-grade electronics specialists which the voivodship office cannot afford to hire, owing to the fact that wages in state administrative offices are not competitive with those paid in other places of employment. It would be useful for MAiGP to examine this aspect of the issue.

#### Rural Radiotelephone Networks

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 9, 5 May 84 p 33

[Article: "Communications for Rural Areas"]

[Text] At the end of February, deputies on the Sejm Transportation and Communications Commission became familiar with problems which communications ministry employees presented concerning the radiocommunications and activity of the ministry's scientific research units. In the course of discussion, during which there was an assessment of the effectiveness of the units' work and presentation of the scope of the radio and television program, improvement of postal service, the construction of relay stations, and short-wave problems, there was also a great deal of criticism concerning the very low level of



rural telecommunications. Among the 12 deputies who took the floor, seven brought up this problem. It was mentioned that this subject had also been brought up in 1980 and 1983. It was stated that the effects of the commission's efforts in this area were not visible.

Some of the deputies mentioned the great neglect or even lack of appreciation, on the part of institutions and persons charged with conducting field repairs and maintenance, of the farmers' needs and work. For example, one of the deputies brought up a Siedlce Voivodship gmina in which a small telephone exchange with 100 numbers had been installed 2 years ago but only six of them are working today, as the result of the maintenance service's neglect of duty. This is the cause of much bitterness among the gmina's residents.

The representatives of the Ministry of Communications explained that at the present time the situation is as follows: The majority of the telephone exchanges in operation are both physically and technically antiquated. They cannot be connected to an automatic network. On the other hand, new automatic exchanges with a capacity of from 50 to 444 numbers are being produced by three plants in Poland. At the same time, production of electronic exchanges is being set up. Thus, in the near future the problem will not be a shortage of exchanges. The problem is the overhead system, which is very costly and materials-intensive, requiring imports from payments area II (the capitalist countries).

At the moment the country cannot afford it. The situation may be rectified by what is called mobile land radiocommunications. Thus, for example, in 1978 the administration ministry, in conjunction with the communications ministry, began construction of voivodship radiotelephone networks to meet the needs of administration between the voivodship offices and the lower-level offices. Certain larger places of employment and plants were also included. Through special central equipment, MORAD, produced by the communications ministry, the voivodship radiotelephone networks are cooperating with the public cable telex and telephone network, by means of which they can serve the functions of radiotelephone general use networks. At the present time these networks in the target version are operating in 35 voivodships. By the end of 1985 they will be set up in the rest of the voivodships.

Alongside the anticipated construction of the above-mentioned network, the communications ministry also foresees the use of radiotelephone communications for improvement in rural telephone service. The Communications Institute has developed models of stationary subscriber radiotelephone connections (RSLA), which replace circuit connections between subscribers and the telephone exchange on the basis of multi-channel radiotelephone equipment. The RSLA equipment is designated for use where it is technically difficult, economically unfeasible, or impossible in the given area to use circuit hook-ups. RSLA production on an industrial scale will begin in 1986/1987. It is anticipated that subscriber equipment units will reach 100,000 and central exchange equipment, about 2,500 units.

10790

CSO: 5500/3013

TELCO INTRODUCING FIBRE OPTICS FOR OVERSEAS CABLE

Hamilton THE ROYAL GAZETTE in English 3 May 84 p 13

[Excerpt]

The Bermuda Telephone Company will this month embark on a major telecommunications project designed to meet expected growth in overseas telephone traffic for at least the next two decades.

The project provides for the installation of Bermuda's first fibre optic transmission system — a \$700,000 investment financed jointly by Telco and Cable & Wireless.

The system, which should come in to operation in September this year, features an underground cable carrying

eight tiny glass strands, or fibres, along which laser emissions are transmitted. It will replace three cables carrying copper wires which presently connect Telco exchanges with the Cable & Wireless plant in Devonshire.

A total of 14.7 kilometres of the new fibre optic cable will be installed this month in existing underground ducts which form a ring linking exchanges in Hamilton and Paget with the Devonshire plant. The ring will eventually carry all overseas calls to and from Bermuda.

When complete, the system will provide 672 international telephone circuits — more than double the current number available on Telco's copper wire cables — with additional capacity for more than 2,000 circuits.

The system, supplied by Canada's Northern Telecom and described by Telco as state of the art telecommunications, will also provide video circuits — the same as those used this week at the opening of C&W's new earth station to allow Premier, the Hon. John Swan to see and talk to British Prime Minister, Margaret Thatcher.

CSO: 5540/004

MEXICO

BRIEFS

RADIO STATION RENAMED--Mexico City, 24 May (NOTIMEX)--Mexico's general directorate of Radio, Television and Cinematography (RTC) has reported that the Mexican Radio Institute's XEB station--which has been identified for several years as Mexico's Capital "B" [La B Grande de Mexico]--will change its name to Radio Mexico. The RTC also reported that the Mexican Radio Institute's short-wave stations will be known as Radio Mexico-International. [Excerpts] [Mexico City NOTIMEX in Spanish 1722 GMT 24 May 84 FL]

CSO: 5500/2043

## INSAT OFFICIAL TELLS PLANS FOR SATELLITES

New Delhi PATRIOT in English 18 May 84 p 5

[Text]

**Bangalore, May 17 (UNI)** — India would attain the capability to launch remote sensing satellites by the end of the 1980s, INSAT project director J P Singh said here today.

Participating in a telemeet programme of the All India Radio organised in connection with the world telecommunication day, Mr Singh told a questioner in Trivandrum that in the early 1990s the country would put communication satellites in the geostationary orbit.

The programme coordinated by AIR, Madras, was hooked to AIR stations in Leh in Jammu and Kashmir, Shillong, Minicoy in Lakshadweep islands, Port Blair in Andamans, Panaji and Trivandrum, besides Bangalore and Madras.

The telemeet programme which began with introductory remarks by AIR's Madras director, R N Nair, described the meet as an attempt to prove that man was nearer to each other than at any other time in history.

The programme moderator, K Swaminathan, managing director of the Indian Telephone Industries, Bangalore in his brief remarks said the telemeet was being put to use for some time the world over and India too was now building up capability.

This was followed by reports of location and surroundings from AIR stations at Trivandrum, Bangalore, Panaji and Shillong and the earth stations at Minicoy, Port Blair and Leh.

Audiences were given an experience in interactive communication when Mr M B Srinivasan, leader of a popular Choral group at Madras station recited a children's song written

by poet Subramania Bharati which was repeated by children from Port Blair, Shillong and Minicoy.

The programme initially included a question and answer session between scientists at different locations and the Antarctica expedition team member in the icy continent. The compere of the Madras AIR, however, announced that since the time was 0300 hours there, it had been decided not to wake up the sleeping scientists.

A voice recording of a conversation between the expedition team members and the scientists of Leh National Institute of Oceanography, Panaji held a day back was, however, played. The leader of the expedition, Gupta, now in Trivandrum sent a message to the team members wishing them well. He said the country was eagerly awaiting their return in 9 months to know about their experiments.

In another programme, a noted neurosurgeon of Madras Dr S Kalyanaraman was asked questions on treatment of brain disorders and high altitude effects on the human body by a questioner in Leh.

In his remarks Dr Kalyanaraman said the telemeet would help in quick diagnosis and prompt treatment of such disorders. He hoped that it would usher in a new era in the management and treatment of head injuries.

The programmes also included folk music of Leh, Port Blair and Minicoy, a telequiz programme and Western music from AIR, Shillong.

CSO: 5550/0017

## INFORMATION MINISTER ADDRESSES CAIRO CONFERENCE

Calcutta THE STATESMAN in English 11 May 84 p 5

[Text] CAIRO, May 10--India yesterday announced that it had decided to give substantial reductions in communication tariffs for operation of the non-aligned news agencies pool in order to help "freer and more balanced flow of information," reports PTI

Addressing the conference of Ministers of Information and Communication of non-aligned countries here, Mr H. K. L. Bhagat, Minister for Information and Broadcasting said that this was the first step in implementing the recommendations of the New Delhi non-aligned summit for lowering of such tariffs. India would associate itself fully with collective efforts for further reductions, he added.

The two-day conference, which was earlier opened by Egypt's Deputy Prime Minister and Foreign Minister, Mr Kamal Hasan Ali, will discuss the issue of tariffs and communication facilities. It is being attended by 11 countries which act as redistribution centres of news agencies pool.

The New Delhi summit had decided that reduction in the tariffs should be considered at least, as a beginning for the media of non-aligned countries. Information Ministers of non-aligned countries had adopted a resolution at their meeting in Djakarta in January on lowering of these tariffs and suggested a meeting at Cairo to discuss "practical solutions" in this regard.

During his stay here, the Minister will have discussions with his counterparts from other countries.

Mr Bhagat, who was the first speaker after Mr Ali, pointed out that the problem of tariff concessions had been agitating the media and it had assumed particular importance because the efforts of non-aligned countries to correct imbalances in national and international flow of information and to progressively reduce disparities in communication capabilities were inhibited by the existing levels of tariff which were too high.

The whole philosophy behind freer and more balanced flow of information was to bring into the communication process not only weaker sections of society such as vast masses of people living in villages but also to enable countries with inadequate capabilities to play their role on a fair and equitable basis, he said.

In his inaugural speech, Dr Ali suggested that the non-aligned countries should take a unified stand in international communication organizations and agencies which would enable them to exert influence to serve their interests.

He stressed the need for the information media in non-aligned countries not to be dependent on "foreign information institutions" for news. Information content in developing countries had to conform to their circumstances and problems, he added.

In a resolution submitted to the conference Egypt has called for 1985 to be observed as the year of information for the mass media of non-aligned countries.

CSO: 5550/0015

## BRIEFS

RURAL ELECTRONIC EXCHANGE--(PTI)--The first rural automatic electronic telephone exchange in the country was opened at Mehunbare by the Union deputy communications minister, Mr. Vijay Naval Patil, on Saturday. Mr. Patil said a 100 such exchanges would be set up in the near future. [Text] [Bombay THE TIMES OF INDIA in English 14 May 84 p 15]

INDIA-PAKISTAN STD--ISLAMABAD, May 14 (PTI)--Direct dialling telephone facility between India and Pakistan is now expected to be introduced in October. The subscribers trunk dialling (STD) facility could not be started in March as planned because of technical difficulties, Indian officials said. The equipment was installed about two-and-a-half months ago, but the working of the eight channel system was found to be unsatisfactory during the trial run. The officials said that the facility would become operational after the work on coaxial lines between Amritsar and Lahore was completed. The Indian officials denied Pakistani press reports that India was having second thoughts on the project and that there was lack of co-operation from Indian telecommunications officials. The delay was due to technical reasons, the officials said. The Lahore-Amritsar circuit is expected to link Lahore with eight Indian cities and likewise these cities will have direct dialling facility with major Pakistani cities through Lahore. [Text] [Bombay THE TIMES OF INDIA in English 15 May 84 p 6]

INSAT-1B TRANSPONDER USE--Bangalore, May 17 (UNI)--Doordarshan would use an additional transponder of INSAT-1B to beam the special programme planned for the North-Eastern region. An Indian Space Research Organisation (ISRO) spokesman told newsmen here today that though Doordarshan was given only two S-band transponders for its transmission, it was also using the C-band transponder to beam programmes. The multipurpose satellite was functioning well and 37 of the 45 Doordarshan Kendras and 30 AIR stations were linked to it. The spokesman said the prototype of the disaster warning system has been successfully tested by INSAT-1B and 100 DWs units would be set up on the coasts of Tamilnadu and Andhra Pradesh this year end. The disaster warning system was the first of its kind in the world, he said. The very high resolution radiometer (VHRR) of the satellite was beaming 12 weather pictures at present. The frequency would be increased during the monsoon. Of the 2,000 circuits planned for the first year for telecommunication purposes, 1,200 circuits were already linked to the satellite, he said. [Text] [New Delhi PATRIOT in English 18 May 84 p 5]

# TELECOMMUNICATIONS MINISTRY CARRIES OUT REGIONAL PROJECTS

Baghdad THE BAGHDAD OBSERVER in English 8 May 84 p 2

[Text]

Minister of Transport and Telecommunications, Mr Abdul Jabbar Abdul Rahim Al-Asadi, on Sunday opened the 14th conference of Arab Telecommunication Union.

The conference is being held round the theme "the completion of Arab telecommunication network is a major step towards Arab unity.". In his speech, the Minister said the convening of the 14th conference in Baghdad was to promote telecommunication services in the Arab countries.

Mr Al-Asadi noted that the Iraqi Ministry of Transport and Telecommunications had drawn up ambitious plans and had carried out several projects inside Iraq and in some Arab countries.

On the domestic front, the Minister said, telecommunications had undergone wide-scale development.

Among the projects implemented in this regard were: the project of rural telephone exchange covering one hundred districts and subdistricts, the project for inter-city microwave link covering almost every part of Iraq.

Coaxial cables project was also carried out in order to facilitate the work of microwave network and provide flexibility for inter-city contacts. Other projects include international telephone exchanges, one of electronic type has actually gone into service and the other one is still under construction, the Minister said.

Mr Al-Asadi said that digital microwave projects have been implemented to link districts and subdistricts with city centres. This type of network has also been introduced to link various exchange in Baghdad.



Other projects for underground telephone network were also implemented in order to provide the necessary lines after putting into service the exchanges above.

The Minister went on to say that laser facilities which, proved to be very effective, would be used in Baghdad telecommunications. The Minister said that space telecommunications facilities would be increased through the utilization of TELESAT, Inter-sputnik and ARAB-SAT.

On the Pan-Arab and international levels, the Minister said, Iraq has attached importance to projects that provide contacts between Iraq, Arab and foreign countries. In this regard, microwave project between Iraq, Syria and Kuwait was implemented. Another project was to link these three countries with coaxial cables.

The Iraqi Minister said that microwave and coaxial projects to link Iraq and Jordan were due to be accomplished this year. It is noteworthy that Iraq and Jordan are also linked by satellite.

Iraq and Turkey are linked by a microwave network. The Minister said Iraq has also a network of three

ground stations which operates in conjunction with the Inter-sat, Inter sputnik and ARABSAT which are still under construction.

The Minister said that the delegations would be invited to see on site the development undergoing in Iraq in various fields especially in the telecommunications sector which has developed rapidly despite war conditions. The conference agenda includes such topics as, the report on the general secretariat activities, coordination between ARAB-SAT union and Arab and international organizations, translation of Nairobi convention of 1982, the study of Arab telecommunications-institutes providing support to Lebanon, Mauritania and Palestine Liberation Organisation (PLO) in telecommunications-field. Secretary General will also be elected.

The union's flag, emblem and the anniversary day will be adopted.

Other topics are ground station's operation and maintenance, telecommunications industry and other technical issues, Telecommunications charges and fees, projects prospectus, administrative and financial issues, 15th conference agenda will also be discussed.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

ACHIEVEMENTS OF LATEST MICROWAVE INSTALLATION PROJECT DETAILED

Aden 14 UKTUBAR in Arabic 18 Apr 84 p 3

/Article by Huda Fadl: "The National and Regional Systems Are among the Most Important Communications Projects This Year"/

/Text The two national and regional communications systems projects are ones whose importance reflects the volume of money invested in them. They have been built in order to solve the communications problems that exist now and keep abreast of the development taking place in this field in many countries of the world. It was on these two projects that we raised a group of questions to which the manager of these two projects, our brother Mustafa 'Abd-al-Rahim al-Saqqaf, responded.

/Question What does the national system project consist of?

/Answer The national system project is based on a compact series of separate telecommunications stations, many of them situated on hilltops. These are linked by invisible waves called "microwaves" which in their diffusion resemble light waves. They have the ability to transmit telephone communications, television and radio programs and cables simultaneously.

This type of system is dominant today in most countries of the world which have television transmission covering all their territory and domestic and foreign automatic telephone services. All the countries adjacent to us have networks of this type now.

/Question What is the cost of the project estimated to be, and what body is carrying it out?

/Answer On 14 July 1982 a contract was made between the Communications Authority and the French firm Thompson CSF to construct the project for a total estimated at about \$28.5 million. This rose recently to about \$32.5 million as a result of the increase in the volume of work.

Contracts have been made, and will be made, with local bodies to carry out the commitments outside the scope of the contract with the French company. The authority is also seeking the aid of two British companies in a limited manner to provide specialized consultation in the fields of civil engineering and electronic engineering, to help supervise construction.

The Communications Authority bears not just the responsibility of seeking to make the construction a success but also that of constructing the project at the lowest possible cost.

Total project cost, including the contract, government commitments and a reserve for prices and quantities comes to 17.5 million dinars, which are now being spent out of the government treasury.

/Question/ What are the components of the project?

/Answer/ More than 322 microwave systems with a capacity of 960 telephone channels, one television channel and two radio channels. These systems are deployed over 32 sites in the republic, most of them in higher mountain areas.

Four village communications stations in conjunction with microwave stations.

Fourteen television transmission stations, six of which are in conjunction with microwave stations while the others are independent.

Thirty-eight steel towers, the highest of which is 100 meters in elevation.

Seventy-two circular reception and transmission antennas.

About 5 kilometers of coaxial cables.

Solar energy equipment for operating 15 stations.

Seventy-four buildings equipped to house the systems, 15 of which are equipped with an internal cooling system without electric air conditioning.

Civil work, roads, foundations and so forth.

The cost of this comes to more than 30 percent of the cost of the project.

Other services and accessories, training, erection, maintenance, spare parts, maintenance equipment and so forth and electrical equipment (standby generators, underground and overhead electric lines, and so forth).

#### Services

/Question/ What services will the project offer in the domestic and foreign contexts?

/Answer/ Transmitting direct television transmission to various governorates, as far as the Governorate of Hadramawt; this will cover 80 percent of the inhabitants of the republic.

Creating the basis for automatic telephone service among towns in the republic and also between the towns of the republic and other countries, by integrating the project with the regional network project, on condition that other technical accessories be made available.

When construction of the al-Shahar-al-Ghayzah coastal road is completed, it will be possible in the future to extend the project in a later stage to the Governorate of al-Mahrah, so that all the towns and villages situated close to this road will be able to benefit from television transmission and automatic telephone service, because the stations will be along the road.

/Question/ When will the project be completed?

/Answer/ The construction company is supposed to finish work in the first quarter of 1985. However, the fear is that some circumstances will prevent the rapid use of the project facilities. The most important of these circumstances is the delay in the construction of the new communications building in the telephone department in al-Mu'alla, which will house the system control and maintenance equipment.

In contemplating the circumstances concerning the project, we do not expect that use will start to be made of the project services in an effective fashion before 1986.

#### Evaluating the Level of Construction

At the end of March 1984 the material completion at the project sites was estimated at about 13 percent. The process of equipment manufacture has made big strides which have outstripped the program planned for it. The financial completion of the project now comes to about 20 percent and large quantities of project materials and equipment are being transferred to more than 10 of the project's mountain locations with the use of helicopters belonging to the Democratic Yemen air force.

#### The Regional System

/Question/ Could you talk to us about the regional system?

/Answer/ The regional system project is an integrated communications project in which five countries are participating--both halves of Yemen, Jibouti, Somalia and the Kingdom of Saudi Arabia. We hope that Ethiopia will join it soon.

The project is aimed at constructing a microwave system among these countries and establishing international domestic telephone exchanges in Aden and Jibouti. The project will also be able to exchange television and radio programs with the utmost flexibility among these countries.

In the southern part of Yemen, the project is being constructed on a basis of four microwave stations connecting the cities of Aden and Ta'izz, and an international domestic exchange to interconnect the various telephone exchanges in the republic via the domestic system. The telephone exchanges in the republic will also be connected to the telephone exchanges of other countries by extending the Aden-Ta'izz microwave line.

To describe the function of the regional system project and its integration with the national system project, we can give the following example:

If a citizen in Aden wants to get in touch with a citizen in al-Mukalla, he can dial the number 051 on his telephone, contact the subscriber's number in al-Mukalla and speak to him directly and immediately, or vice versa.

If a citizen in Aden wants to get in touch with a citizen in Sanaa he can dial the number 00967 on his telephone, which is connected to the number of the subscriber in Sanaa, and speak to him directly and immediately, or vice versa.

The same is the case with regard to any citizen linked to a telephone exchange in any of the towns of the republic.

/Question/ What body is doing the construction?

/Answer/ The contract to construct this project was made with two French companies:

The Thompson-CSF firm, to build the microwave stations, on 29 March 1982, and the French company SGST, to build the international domestic exchange, on 14 November 1982

/Question/ Is it expected that the project will be completed on schedule?

/Answer/ It would have been possible for the two companies to complete the project on the side of the southern part before the end of this year, had the communications building in al-Mu'alla been completed. However, in view of the delay in the construction of this building, it will not be possible to use the project equipment before 1986.

The construction of the international exchange is now on the verge of being completed and the civil work on the regional microwave system project is on its way to being completed, with the advent of May.

#### The Cost of the Project

/Question/ What is the total cost of the project?

/Answer/ The cost of the regional system project comes to more than 3 million dinars in all, roughly half of which will be covered by a loan from the Arab Fund for Economic and Social Development, Kuwait, and the other half directly by money from the Communications Authority.

#### Training and Accreditation

/Question/ Is there a shortage of capable people who can run the two projects? Does accreditation in these two areas depend 100 percent on foreign accreditation?

/Answer/ To guarantee the maintenance and operation of the domestic and regional system project facilities, the authority has set out an integrated plan which can be summarized as follows:

Control and surveillance equipment for the main system in Aden and two branches of the domestic system in al-Mukalla and Say'un, and a high-capacity direct connection system among surveillance stations in the three cities.

Training outside the republic for a number of authority engineers. Great progress has now been made in this in training in the field of microwaves and television transmission.

Another group of engineers of the Telephone Department in Aden are to travel to France for training in the maintenance and operation of the Aden international exchange this year.

Training during the warranty period. Engineers from the construction companies will provide this while they are in the republic, for a period of a year after startup of operation in the two systems, for the greatest necessary number of authority engineers.

Establishment of three maintenance teams--a main team in Aden and two branch teams in al-Mukalla and Say'un.

The three teams will have a high degree of flexibility in work and special facilities which will enable the people in them to move to any station in the two projects in less than 12 hours in the event disruptions occur, or for periodic maintenance.

It is worth pointing out that it is not necessary that people be present in the modern microwave stations. Each station is in charge of issuing signals without interruption which show the condition and good state of its equipment, and automatically give notice of any disturbances in them to the maintenance team centers on special screens. In addition, each station is equipped with main equipment and other reserve equipment so that the reserve equipment can immediately and automatically take over the performance of all the station's functions if damage afflicts the main equipment. This system will guarantee a high degree of service continuity.

11887

CSO: 5500/4512

TELEPHONE, TELEVISION AGREEMENT SIGNED WITH SOFRECOM

Libreville L'UNION in French 11 May 84 p 7

[Article by L.D.D.: "Television and Telephone Throughout Gabon"]

[Text] "It indeed appears indispensable to give all regions, even the most distant, modern means of communication with the capital and among themselves and [the means] of receiving news. Only on this basis will we be able to end the isolation of the majority of inland centers and facilitate local industrial and commercial activities." With these words, Mr. Zacharie Myboto, minister of information, posts and telecommunications, explained, last Saturday morning in the ministry's conference room, the signing of the agreement between the Gabonese government and Sofrecom (French Telecommunications Equipment Research and Production Company).

The signing of this contract, which involves a study of the program for telecommunication and television coverage of all of Gabon, took place in the presence of Ministers Jean-Pierre Lemboumba-Lepandou (economy and finance), Pascal Nze (planning and territorial development) and Mr Jean Bidaut, representing Sofrecom's President-Director General.

In a speech made on this occasion, the minister of information, posts and telecommunications stated that as part of the plan for the social and economic development of Gabon, the role of the mail service, telecommunications and television appears essential to meeting the objectives established by the head of state, El Hadj Omar Bongo, particularly as concerns maintaining the population in the provinces.

The present program, Mr Myboto stated, is divided into integrated groups or modules; each module covers all the installations necessary to provide telecommunication and television service to a region.

The different groups are as follows: the first involves greater Libreville; the second, the northern and eastern lines (Oyem and Makokou, including reinforcement of the shared trunk line); the third, the southern line (Mouila, Ndende and Tchibanga); the fourth, the southeast (Franceville and surroundings); and finally the fifth, the cross-country line.

In addition to the technical and financial aspects, Sofrecom will study the problems of maintenance and training posed by the installation of the new equipment. As part of the mission that the Gabonese government has entrusted to it, the company is charged with organizing the national telecommunications domain, the department and with providing additional training to the personnel that will be assigned to it.

The new department will see to the plan, the programs and the engineering (studies and equipment production). Sofrecom is also to conduct under its responsibility the engineering of the major projects defined in the contract.

On the other hand, the actual construction will be carried out in accordance with the provisions that define the detail of the studies to be made and the documents to be prepared; the execution schedule and the details to be respected. It should be noted that the contract, excluding taxes on the sales volume, is valued at close to 700 million CFA francs.

The prices, it was emphasized by a high official of the Ministry of Information, Posts and Telecommunications, are firm and cannot be revised for the portion of the lump-sum performed before the end of 1984.

12413

CSO: 5500/84



NIGERIA

BRIEFS

SCRAPPING SOME RADIO STATIONS--Benin, 3 June (NAN)--The minister of information, youth, sports and culture, Group Capt Samson Omeruah, has said that all of Radio Nigeria's stations whose structures and studios were not fully established would be scrapped. He told the NEWS AGENCY OF NIGERIA (NAN) in Benin on Friday that a committee had been set up to look into the structures and studios of all the stations and to make recommendations on their findings to the government. [Excerpts] [AB031338 Lagos NAN in English 1330 GMT 3 Jun 84]

CSO: 5500/81

# MICROWAVE LINK WITH BOTSWANA

Gaborone THE GUARDIAN in English 18 May 84 p 2

[Text] HARARE — Zimbabwe is to commission a microwave link with Botswana in the near future as part of measures designed to reduce dependence on South Africa, Zimbabwe's President, Rev. Canaan Banana, told a meeting of the Pan-African Postal Union in Harare recently.

Rev Banana told delegates from all over the African continent that the microwave link will be similar to the one which was commissioned recently by the Prime Minister, Mr Robert Mugabe and the Zambian President, Dr Kenneth Kaunda, linking the two countries.

"Zimbabwe would also commission microwave links with Malawi and Mozambique before opening the international switching centre in Gweru (formerly Gwelo), Zimbabwe's third largest city, in August this year.

Rev Banana said Zimbabwe was about to complete her part of the Panafel network and the gateway exchange to be commissioned in Gweru

would make it possible for the country to dial directly to all other countries of the Southern African Development Co-ordinating Conference (SADCC) without having to go through the racist regime in Pretoria.

"At present all outgoing telephone calls are still routed through Cape Town in racist South Africa despite the political differences that exist between the two countries.

"We have started constructing a standard earth station which will make it possible to dispense with the services of South Africa by mid 1985", the president said.

Urging African countries to give priority to communications in their budgets, Rev Banana cited the United States of America, which, he said financial allocation to communications was second only to defence, though the Americans were trying to reach outer space. He said African countries were trying to reach the village.

FEDERAL REPUBLIC OF GERMANY

STATUS, SCALE OF CABLE TV NETWORK SURVEYED

Frankfurt/Main FRANKFURTER ALLGEMEINE in German 5 Jun 84 p 6

[Text] 4 Jun--For the first time a survey exists on the status of the cable system in the Federal Laender. This is coupled with an assessment by the Posts and Telecommunications Administration concerning developments up to 1987. Roughly 1,000 television cable networks laid by the postal administration "supply" television and radio programs to some 7 percent of the 22.1 million "TV households." The thinking of the postal administration is that this figure should be 13 percent by the end of 1984, and 22 percent by the end of 1986.

In Baden-Wuerttemberg, some 216,000 households are being "supplied" with a "cable terminal," in Bavaria 210,000, in Bremen 37,000, in Hamburg 52,000, in Hesse 98,000, in Lower Saxony 177,000, in North Rhine-Westphalia 306,000, in Rhineland-Palatinate 110,000, in the Saarland 14,000, in Schleswig-Holstein 55,000, and in Berlin 498,000--all in all totaling just under 1.8 million households. The formulation "supplied with a cable terminal" means that a so-called interconnection point--a mechanical device usually installed in the basement of a house, which constitutes the end of the lead-in of the cable and thus the end of the responsibility of the postal administration--has been furnished or can be provided within a short time.

A distinctly smaller number of households actually receive cable television--that is, have undertaken also the necessary interior wiring in the house and possess appropriately equipped receivers. The postal administration estimates this number at 605,000. From that it deduces as the present subscriber line density a figure of just under 30 percent. This assumption is also supported by data from the main postal directorates or Land postal directorates. For example, according to information from the Land postal directorate, in Berlin there are 170,000 households, and according to data from the main postal directorate of Hanover there are 65,000 in Lower Saxony and 110,000 in North Rhine-Westphalia--thus not much more than 2 1/2 percent of the television households are also cable households. Assuming the subscriber line density remains constant and given a confirmation of the predictions of the postal administration concerning the further running of cables, by the end of this year we will have 4.5 percent of all households receiving cable television, and by the end of 1986 somewhat more than 8 percent.

But: About 49 percent of households still receive television and radio programs without wires via individual antennas, about 1 percent are still "not covered," and about 42 percent are connected via cables to 340,000 community or large-community antennas which are "accounted for" by the postal administration "in terms of the licensing law." Mr Ring, head of broadcasting in the Munich state chancellery, says that in Bavaria about 60,000 households are connected up to community antennas. He says that among other cities, Rosenheim has a communal cable network, and in Munich this is true also of Olympia Park.

In the FRG, the cable system is composed of the postal administration's television cable networks and private cable facilities. The total cable grid is more dense than the postal administration indicates, but it is not uniform, is in part outdated, and is not even a network, but rather a patchwork. The 1,000 television cable networks and roughly 800 large-community antenna systems with attached cable terminals are distributed like islands in the sea. Their location depends on topographical features or on the chance filing of an application for a cable hookup with the postal administration. So far nobody has disapproved of this. The broadcasting service is officially regarded as extraordinarily good. But difficulties are now arising with the attempt to apply the expanded technical possibilities. This is what the postal administration wants to engineer. It is definitely one of its tasks.

#### Authority Is Divided

The federal structure of the FRG, with its extensive apportionment of areas of jurisdiction to the Laender, is reflected in the way the broadcasting service is regulated. Authority is divided. The Laender are responsible for the programs, while the transmitting procedure is the task of the Posts and Telecommunications Administration. The posts and telecommunications minister wants to adapt the coverage of the broadcasting service to the changed technical conditions, and to broadcast as many television programs as possible by way of the highest possible number of television cable terminals.

Besides the cable system, this includes also satellite technology and wireless transmission via radio relay. The postal administration has decided to feed the regional third TV channels into cable systems everywhere in the FRG. Therefore the radio relay network is being rapidly expanded. Its first stage of development is supposed to be in operation from the middle of 1985 on. In this way the foreign channels which can be received in addition in border areas could be transmitted and fed into cable systems everywhere. The postal administration says that the costs are justifiable.

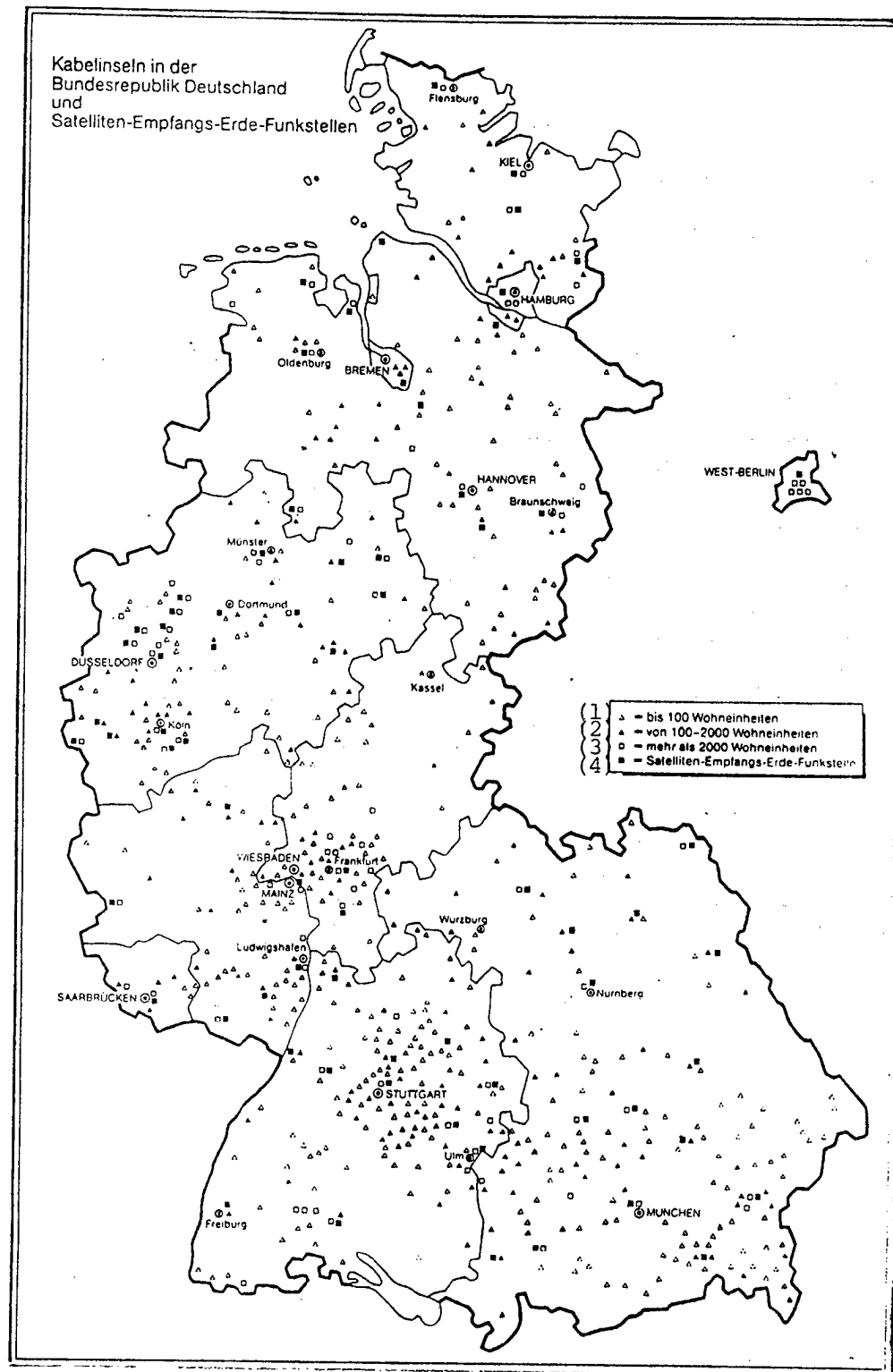
In the introducing of programs to the subscriber, satellite technology is taking on an increasing importance. For the postal administration, programs beamed from satellites are "available at local option." The options have grown. For example, programs will be transmitted via TV-Sat--the German broadcasting satellite which can be picked up directly. This

satellite is to begin its service in 1985 as part of a German-French agreement, and its French counterpart TDF 1 is to go into operation a year later. The programs which TV-Sat transmits as well as those of TDF 1 are regarded as optionally a part of local reception. Broadcasting satellites beam programs at over 200 watts. The subscriber receives them "directly" in small antennas which have diameters of about 90 centimeters. The transmitting power of broadcasting satellites is more than 10 times as strong as that of communications satellites.

The rule of thumb that whatever "is invested in the sky can be saved on earth" applies conversely to the communications satellites. Their power ranges between 20 and 40 watts. The receiving systems, which are paraboloid-shaped dishes, are three times as large--up to 3 meters in diameter. They are preferably located in the vicinity of cable distribution systems. A map furnished by the Posts and Telecommunications Administration does not merely show the television cable networks; 72 points also mark the sites of the earth receiving stations, as they are called in the language of bureaucracy. For each one, the postal administration calculates an assembly time of less than 4 days and costs of just under DM 100,000.

By the end of the year at the latest, says Postmaster Schwarz-Schilling, everything should be in place. But the minister presidents have not yet approved the sites. The Laender must be asked, because the feeding in of broadcasts has to do with independence in educational and cultural matters, and that is the affair of the Laender. Programs beamed from communications satellites can be received only with the approval of the minister presidents. In this case, what is "locally optional" is decided by Land policy. Schwarz-Schilling asked the minister presidents some time ago to agree to test broadcasts via satellite for a period of 2 months. The chairman of the Broadcasting Commission of the Laender, Rhineland-Palatinate Minister President Vogel, let it be known that the Federal Laender have "agreed in essence." Nor had the broadcasting officials of the Laender expressed any misgivings about it. The technical tests on the distribution of broadcasts via satellite are to begin this very month and are to last about 8 weeks. A receiving and transmitting station for programs of the communications satellites is located in Usingen. There are other receiving stations in the two test cities for cable television, Munich (where about 1,000 cable households are being supplied) and Ludwigshafen (2,200). Still others exist already at Kiel (where technically but not yet legally there is a capability for 6,000 households), at Hanover (6,000), at Meschede in the Sauerland (500), at Weiden in the Upper Palatinate (500), and in Berlin (40,000). Satellite television programs via cable systems are technically receivable even now in more than 50,000 households. In Darmstadt another receiving station has been installed for test purposes, in Hagen (for the cable test area of Dortmund) there exists a feed-in capability for 500 households, and in Stuttgart about 7,500 residences soon could receive satellite programs via cable.

The communications satellite ECS 1 has been beaming four channels for some time now: A private one, a public one, the English-language "Sky Channel," and the French "TV 5." From 1985 on, a satellite of the "Intelsat V"



Map: Cable Islands in the FRG and Satellite Earth Receiving Stations

- Key:
1. up to 100 housing units
  2. from 100-2,000 housing units
  3. more than 2,000 housing units
  4. satellite earth receiving stations

series will beam broadcasts on six channels. The postal administration already leased capacity on this in September of last year.

Communications satellites in the sky make it necessary to develop a cable system on the earth. For example, in Duesseldorf, the capital of the Land of North Rhine-Westphalia, according to the postal administration's reckoning some 54,788 households have the cabling, in Frankfurt 41,500, and in Hamburg 51,500. In Rhineland-Palatinate, Minister President Vogel has announced an enlargement of the law applying to the cable-television experiment into a Land media law. It would be possible to receive satellite television programs in Kaiserslautern with 11,000 cable terminals, in Koblenz with 3,000, in Mainz with 12,000, and in Trier with 6,000. In Lower Saxony, the first Land media law of the FRG was passed recently. Two different things will be possible and will be allowed in the Laender.

The decision boils down to choosing between a cable system and using the communications satellites on the one hand, and deploying broadcasting satellites together with the individual procurement of small receiving antennas on the other. The first solution is favored by the postal administration, the second is what the critics currently imagine the postmaster is keeping his eye on. The latter is largely beyond the influence of the minister presidents. The foreseeable costs call for delay and testing, but time is growing pressing and short. No expert is venturing at present to try to predict for certain which of the satellites "will win the race" and what preparations should be made on the ground. These days the broadcasting officials are making the preparations for the reorganization of the electronic media, as they were mandated; after the last meeting it was announced on 23 February that the minister presidents should make a decision about this on 6 June.

12114

CSO: 5500/2701

MATRA COMMUNICATION TO OPEN U.S. SUBSIDIARY

Products Offered

Paris ELECTRONIQUE ACTUALITES in French 18 May 84 p 15

[Article by D. Levy]

[Text] Born last April from the unification in a common subsidiary of the activities of the parent firm and Temat in the field of telephones, telematic terminals and systems, and professional television equipment, Matra Communication is now starting a strong growth phase after a period of recovery.

Its turnover, which will reach Fr 800 MF this year, will have quadrupled since 1980, and its successful diversification into electronics and telematic terminals gives it access to new telecommunications markets. For this reason the United States is Matra Communication's favored export target, and a subsidiary will be established there next September.

When in 1979 Matra bought back CTD (Depaepe group), which was then in trouble, it launched a double effort: to modernize its production system, and to escape from a "single product" situation in which it manufactured only the S63 dial telephone.

Four years later, at an investment cost of 100 MF, to which 60 MF would be added in the 1984 fiscal year, those objectives were attained and financial recovery completed, with a net profit of 20 MF in 1983 compared to a loss of 28 MF in 1979, and a period of strong growth was begun.

In 1983 Temat's turnover in fact reached 584 MF, a rise of 23 percent over 1982 and nearly 60 percent over 1981. Sales of telephones grew by 18 percent, while those of terminals rose 276 percent. The takeoff of this activity--which now accounts for 10 percent of a turnover 70 percent of which represents exports--is now a fact.



## Two Million Telephones

Today Matra Communication--whose other pole of telecommunications activities includes radiotelephones and small unit automatic exchanges for private use--looms as the major European producer of telephones, with nearly two million sets delivered in 1983; and as a leader in terminals, with a capacity of 150,000 telematic terminals. Its work force totals 1,750 in Brittany with plants in Pont-de-Buis and Douarnenez, and a new headquarters in Quimper dedicated 11 May by Post and Telecommunications Minister Louis Mexandeau.

In terms of telephone sets Matra's production of 1.965 million units in 1983 included 1.575 million sets (dial, pushbutton, and electronic) for Post and Telecommunications and 390,000 sets, including 60,000 pushbutton and electronic units, for the private domestic market and for export.

For Posts and Telecommunications Matra will respond to its call on industry for a low-cost electronic unit by offering both an "economy" product close to the standards set by the ministry, and a unit conforming strictly to its specifications.

For the private consumer market the TM1" was launched in October; 30,000 have been sold, and 1984 sales are estimated at 50,000. It will be supplemented by three new models: the TM2, a compact set; the TM 5, a wall and office set; and the TMX, a newly styled pushbutton set. Overall, Matra expects to sell about 2 million telephone sets by offsetting the 10 percent reduction of the Posts and Telecommunications market through more aggressive efforts in the private and export markets.

### New Terminals

With 14 different models Matra offers the broadest range of telematic terminals, including ASC11 terminals, videotex, compatible ASC11-videotex units with or without integral telephones, intended for professional and broad consumer markets both in France and abroad.

In France an initial order for 100,000 Minitels was placed by the DGT in December 1982, and a further order for 150,000 Minitels is in process. This product for the broad consumer market allows Matra to attain the critical volume needed so it can buy at the best price the pushbutton panels and tubes which are components of professional terminals having hitherto added value. On the professional market the firm has sold nearly 10,000 terminals. The new TTE 820 compatible ASC11-videotex has just been ordered in 1,000 units by the Banque de Paris et des Pays Bas.

On the export market Matra had signed with Tymshare a contract for distribution of 560,000 ASC11 terminals in the United States by 1990. At present 25,000 have been delivered. Tymshare's domestic difficulties, however--and its repurchase by McDonnell-Douglas--have meant that sales of terminals is no longer a priority concern, and this has led Matra to renegotiate its contract with its partner. Concurrently with direct sales of terminals by Tymshare, an American subsidiary of Matra will be established in September and will assume the distribution functions of its partner.

That subsidiary will have the task of distributing the whole range of Matra Communication products. According to Payer, general manager of Matra, the subsidiary will permit his group to keep its lead in the field of professional terminals. "Matra is the point of reference in this domain, and competitors align themselves on our prices," he emphasized, pointing out that Matra terminals are the only ones to have been certified Class B by the FCC, which allows them to be installed on the premises of private individuals, and to offer modem 120C/1200 bps transmission.

In Europe Matra has obtained an initial order for 2,000 TTE 415 terminals for the national electronic communications system of the Netherlands, and is negotiating in Britain, Switzerland, and Belgium.

We note also that Matra has provided 1,500 videotex terminals to Brazil, and set up a videotex system in Kuwait. Following an initial 35 MF contract for the system and 1,300 bilingual Arabic-English terminals, Matra has just obtained an additional 21.5 MF contract to complete 2,000 pages of data and to operate the system for a year.

A new generation of terminals is under development. In addition to an 80-column videotex terminal, the A 630, to be introduced next month, Matra is perfecting an intelligent Minitel, which by means of detachable cartridges will offer extended processing and memory capacities (up to 8 pages).

The growth of Matra Communication, and the flood of financing that requires, does nevertheless raise the question of the group's future in view of the CGE-Thomson rapprochement. Remy, president of Matra, considers that "the problem of critical size does not appear in the terminals field," and that "an enterprise can live if it has good products." As for financing needs, a stock exchange listing, planned by year's end, will meet them.

#### New Negotiations With Tymshare

Paris AFP SCIENCES in French 17 May 84 p 51

[Text] Quimper--Matra has decided to go it alone in its renewed offensive on the American telematics market, and to replace its faltering partner Tymshare in a distribution agreement totaling several billion francs.

Matra will instead create an American subsidiary through which it will conduct its own marketing and local development of new products so as to keep to its original objectives, as was announced 11 May in Quimper by Maurice Remy, director of the group's telecommunications branch, during the dedication of Matra Communication's headquarters in that city.

Tymshare, which experienced financial difficulties last summer and was re-acquired in April by McDonnell-Douglas, had signed an agreement with Matra for direct distribution of 100,000 terminals made by the French group, with an additional 460,000 units to be distributed by the end of the decade.

Operations under that contract, which represented approximately Fr 6 billion for Matra, were delayed by about a year owing to Tymshare's difficulties, and only 20,000 terminals had been distributed by the end of 1983 compared to the 30,000 originally planned.

Matra is now renegotiating its exclusive rights agreement with Tymshare, and is henceforth considering its implantation in the United States as a first step towards more extensive distribution of its products, including radio-telephones, telephones, and others.

Matra has, moreover, just obtained several contracts in France and abroad which confirm its place in the very first rank, worldwide, in telematics.

The group will produce 150,000 Minitels, for a total of approximately Fr 200 million, in addition to the 100,000 units already ordered by Posts, Telephones and Telegraphs in December 1982. It will also provide 1,000 top line professional terminals to the Paribas group for approximately Fr 10 million.

In addition, Matra is signing a Fr 21 million contract for 1,300 English-Arabic bilingual terminals intended for Kuwait, following an initial Fr 35 million contract with that country.

Finally, the Netherlands has ordered nearly Fr 20 million worth of top line terminals for that country's electronic telecommunications system.

Further, Matra Communication (formerly Temat), which reached a turnover of Fr 584 million--a 23 percent increase--and made a net profit of Fr 20 million in 1983, is now preparing a flat-screen Minitel version for 1988, and an "intelligent" model which will make it a true microcomputer for next year.

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CSO: 5500/2698

FRANCE

# THOMSON, CGE REORGANIZATIONS RESULT IN NEW FIRMS

Paris AFP SCIENCES in French 17 May 84 p 9

Text The splitup of civilian communications activities by the nationalized Thomson and CGE groups has just resulted in creation of five firms over the planned time period, Thomson announced on 15 May.

Those firms are Alcatel-Thomson Microwave, Alcatel-Thomson Space, Alcatel-Thomson Radiotelephone, Alcatel-Thomson Professional Microprocessing, and Alcatel-Thomson Gigadisc. They will shortly become Thomson Telecommunications subsidiaries, the same source states.

That holding company, formed in January 1984, resulted from an agreement between CGE and Thomson on redefinition of their respective sectors in the telephone field announced in September 1983. It will bring about progressive regrouping of the gamut of Thomson-CSF activities under CGE oversight, and insure their close coordination with those of CIT-Alcatel--which, we recall, is the CGE subsidiary specialized in the telephone field.

The Thomson Telecommunications group is the world's major producer of temporal or fully electronic telephone exchanges, with a third of the market.

Presidents and general managers of the five firms thus formed were appointed "with the concern of insuring the continuity of the management teams currently in office."

MM Jacques Imbert and Jean Guibourg are, respectively, president and general manager of Alcatel-Thomson Microwave, a firm ranking first in Europe and in second place worldwide.

Heading Alcatel-Thomson Space is Imbert, with Gerard Coffinet as general manager. This firm has 10 percent of the world market for payload telecommunications and direct satellite television.

Alcatel-Thomson Radiotelephone, the French leader with 50 percent of the domestic market for private radiotelephones, is headed by Xavier Namy as president and Gerard Boelle as general manager.

MM Jacques-Marie Vandamme and Michel Ginestet are, respectively, president and general manager of Alcatel-Thomson Professional Microprocessing.

Finally, for Alcatel-Thomson Gigadisc, which takes over the digital optical disc department of Thomson-CSF, the president is Pierre Grouvel and the deputy general manager Francois Le Carvennec.

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PHILIP'S EXPERT ON FUTURE OF TELECOMMUNICATIONS

Amsterdam ELSEVIERS MAGAZINE in Dutch 19 May 84 pp 31-37

[Article by Sig. W. Wolf: "Ninety Novels per Second on a Cable of Glass: Communications Technology on the Advance"]

[Excerpt] Picture telephones and mobile telephones. Direct reception of mint satellite pictures. Telecommunications still have a lot in store for us. Philip's top man, Dr Eng K. Teer draws up the balance for the 1980's and 1990's.

Modern companies and offices are now inconceivable without local networks. The problems they raise can sometimes be very complicated. Dr Eng K. Teer, director of the Physics Laboratory of Philips, chairman of the conference: "In the use of local networks, for example, one is up against overtaxation of those networks because of the ever more intensive use of transport lines. For the benefit of the users it is necessary that a kind of traffic regulation is created, which determines which electronic signals will be admitted to 'bypass' the local network. Users should be able to send their texts, pictures or messages without being hampered, and without putting the network in disarray. It is certain that with the application of glass fiber cable many impediments can be undone."

The glass fiber technology, in which data are transported by laser beam, has made great progress in the past years. The developments in the physical-mechanical area have surprised everybody. Ten years ago, a distance of 5 kilometers could be bridged without amplification. Now it is already possible to transport 500 million bits per second, that amounts to 90 novels, over a glass fiber cable of 40 kilometers, without amplifying the signal en route.

The Philips top man sees great potential for the transfer of speech, image and data by way of the so-called ISDN [Integrated Services Digital Networks] networks, which PTT [Postal, Telegraph and Telephone Services] has started constructing. Within 10 years' time, this supernetwork will mean a substantial breakthrough in the new telecommunications services in combination with satellites which will beam directly to the private user. Video teleconferences will supplant normal meetings for the better part.

The ISDN's offer, next to the qualitatively superior signals for image and sound transfer, also a drastic cost decrease for international telephone conversations, the transmission of television pictures, or the use of databanks which are located elsewhere in the world. Also the mobile telephone and the application of speech recognition in computer systems will also assume enormous proportions. There is clear, steady downward trend in the prices of the technologies and products which make that possible.

Dr Teer does not share the skepticism that often arises when the necessity for these telecommunications developments is brought up. "The applications of this technology are inspired by the demand which exists for it. Thanks to telecommunications a flood of information is being poured out over people. It is a challenge, is it not, to provide the user of the new services with means by which he quickly and exactly receives an answer to his specific questions, without complicated commands.

"Information sources such as databanks are rather hard to access at present. The interrogator is entitled to having his questions answered as intelligently as possible, without having to first go through a mountain of procedures. Viewdata, as we know it, will be advanced to a higher degree. A subscriber to Viewdata at present has to first struggle through a series of menus before he finally gets the desired answer. We have to direct ourselves toward user-friendly systems which better order the data, and which offer the possibility for the user to ask questions on a higher level."

Dr Teer emphasizes that with the technology, we have defined an ultimate goal which has not by any means been achieved yet. We still have a long way to go. He opposes the onesided and limited view that the future of telecommunications is only determined in a merger with information processing systems, meaning computers. "When you look at the convenience that the telephone offers, you notice that there still are large regions in the world where people are deprived of that convenience. In those areas there are still huge technical tasks, because by making a telephone set available, you provide people with some ability to act. You should not deny them that global interconnection. In regions where it is technically difficult to install telephone connections, the solution will have to be looked for in the most modern technologies."

"And then we come to the area of the mobile telephone. That application will grow to enormous proportions. There is a very great need to reach someone where he is. That requires a completely new infrastructure with satellites, extending the electronic apparatus in cars. That makes it possible to accurately determine where a driver is located, and therefore, where he can be reached."

"The approaching applications in the area of telecommunications, such as pictorial communications, dialogue between data systems, the use of the mobile telephone, and all those other services come about because people want them. It is a very honorable assignment for telecommunications specialists to satisfy those wishes."

## NONSOCIALIST GOVERNMENT DEMONOPOLIZING TELECOMMUNICATIONS

### Conservative Party Goals Described

Oslo AFTENPOSTEN in Norwegian 23 May 84 p 3

[Article by Morten Malmø: "Will the Private Sector Get to Develop the Telecommunications Network?"]

[Text] If the Conservative Party gets what the party wants, Norwegian industry will be ensured broad participation in the development of new telecommunications services. In addition, clear limits are to be set for which duties the Telecommunications Agency is to have. The Conservative Party wants a national strategy for further development of a nationwide telecommunications network so that Norway can become a forerunner as far as telecommunications are concerned.

These are a few of the main planks of the Conservative Party's new technology platform, which was presented yesterday at a press conference by Conservative Party Platform Committee Chairman Storting Representative Per-Christian Foss. Parts of this platform were discussed Monday in the Conservative Party Central Committee, as part of the party's platform discussion before the Storting election next year.

One of the Conservative Party's main theses is that technological modernization will produce good growth possibilities in both existing industries and in new fields. The party believes that such development can free resources for investing in new growth, especially within service industries. "Seen as a whole, such a strategy will make it possible to create more jobs than those which are lost in the modernization process. The traditional distance handicapped which economic life in remote areas has struggled with will be reduced by advanced extension of communications," it reads further in the platform.

The Conservative Party believes in addition that a broader public effort is required within pure and applied research, that the research policy must be oriented toward consumers, and that it is still necessary to have a venture capital market. The party emphasizes that the individual and businesses must be the driving force behind a successful technological revival.



## Eased Government Regulations

Oslo AFTENPOSTEN in Norwegian 30 May 84 p 2

[Article by Engineer Lars P. Fasting and Economist Jan Lindh: "Telecommunications Monopoly or Industrial Growth?"]

[Text] Transport and Communications Minister Johan J. Jakobsen will in a short time present a proposal to the government for provisional regulations for development and operation of the wideband cable network. A number of well founded protests came forth during the round of hearings. There is reason to fear that these have not been complied with and that the transport and communications minister's proposal clearly favors the Telecommunications Agency. This will have distinct consequences for continued private involvement in the cable TV field.

As late as the summer of 1983 it was believed that the private cable TV industry would get reasonable working terms. After Cabinet Minister Koppernaes resigned as transport and communications minister, however, a distinct deterioration has taken place. The plan now is obviously to push private industry into the background in favor of the Telecommunications Agency.

The development of the wideband cable network has taken place up to now exclusively, so to speak, in the private sector. About 300,000 Norwegian households are hooked up to it today. In Oslo the number of households with cable TV is approximately the same as the number of private households with telephones. This shows how effectively private developers have acted in a period when the Telecommunications Agency struggled with its monopoly problems at that time. Gradually, major industrial concerns also saw the potential and invested in this field as part of necessary development and readjustment.

From government quarters, and especially by Industry Minister Jan Syse, the necessity of Norwegian industry's adapting to new activities in order to turn around the deplorable decline in industrial employment has been emphasized time and time again.

### Regulations

The Transport and Communications Ministry's regulations will contribute to weakening the cable TV sector as an interesting new area of activity for industry. It would like to meet the Telecommunications Agency as a competitor on equal terms. This is not being planned for in the draft of the new regulations.

Hitherto the Telecommunications Agency has only gotten an opportunity to become involved in the cable TV business in connection with individual experimental projects. The regulations give the Telecommunications Agency the "go" signal for nationwide involvement in the cable-TV/telematics sector and presuppose a sharing of responsibility between the Telecommunications Agency and private developers:

The long-distance network, i.e., the part which unites parts of the country, will be the Telecommunications Agency's responsibility.

The local network, i.e., the part which unites a limited geographical area like Oslo, for example, will mainly be the Telecommunications Agency's responsibility, but will be the subject of competition if local considerations call for this.

The subscription network, i.e., the last branch out to individual housing cooperatives, will be entirely a subject of competition.

Long-distance exchanges, group exchanges and terminal exchanges will be the Telecommunications Agency's responsibility.

Uniting of the various network types will be the Telecommunications Agency's responsibility.

The sharing of responsibility will mean radical changing of the cable TV market. There is agreement that the long-distance network and long-distance exchanges ought to be the job of the Telecommunications Agency. But the agreement stops here. For the private cable TV industry, the local network and subscription network with the exchanges which go with them are economically and technically integrated units. The regulations presuppose a division which will give the Telecommunications Agency decisive competition advantages. The Telecommunications Agency can, for example, easily situate its monopoly-granted exchanges so that they do not fit into the private companies' projected cable routes. This will "destroy" existing private systems and rule out new ones.

#### Danger of Conflict

Another proposal which can make competition illusory is the fact that the Telecommunications Agency in dealing with area rights is to be the authority which speaks its opinion regarding the suitability of the choice of projected routes. Here the table is set for the natural conflict which is a consequence of the fact that there is no clear distinction between the Telecommunications Agency's administrative and business functions.

The Transport and Communications Ministry's proposal will cement many important matters concerning cable TV and telematics before these have been politically discussed in the Storting. Has the competition situation between the broadcasting authority and transport and communications authority been clarified? Does the community need the nationwide telematics network? If yes, how much will it cost and who will pay for it? In this connection, the ministry seems to be leaning onesidedly on the recommendation of Telecommunications Committee II and does not even have time to wait for the reports from the Stedte Committee and the Industry Ministry.

The transport and communications minister's personal secretary, Per Arne Wattle, said in an address on 25 April that "the longer development in the cable TV sector takes place without the necessary coordination, the less freedom of

action there will be for politicians to be able to integrate the current cable network into a future telematics network."

Preparations for possible later integration can, however, be made simply through the technical rules which already exist and do not necessitate regulations of the dimensions the Transport and Communications Ministry has submitted. The political freedom of action will certainly be less and not greater through regulations which are put into effect before a political debate.

#### Equal Terms

The question of competition on equal terms is of great fundamental importance, also for Norwegian industry in general. Competition between private industry and State monopolies places very great demands on legislation, in order effectively to avoid the possibility of cross-subsidizing. The Transport and Communications Ministry seems in the short term to have found a satisfactory answer to this very complicated question. The answer is, however, incorrect. The ministry's legislation gives the Telecommunications Agency a number of competition advantages via exclusive rights stipulations and will probably result in the fact that one competitor with the legislation at hand can dispose of the other.

This should worry those in the government who seriously believe that industry ought to be given good scope terms for adaptation and growth.

#### Competition With Private Industry

Oslo AFTENPOSTEN in Norwegian 2 Jun 84 p 8

[Article: "Regulations for Cable Network: Telecommunications Agency to Enter Competition"]

[Text] The Telecommunications Agency has received the green light to begin competition with private cable TV companies in development of the country's cable TV network. The government voted in a cabinet meeting on Friday that the Telecommunications Agency, in addition to taking responsibility for development of the long-distance network and the local network, in the main, is now to compete with private companies for the so-called subscription network.

The provisional regulations for the establishment, development and technical operation of the cable network mean that all who in the future want to build local cable systems over a certain size must apply for rights. The newly established Cable Network Inspectorate and Inspection Council for Cable Networks agencies will in each individual case take a stand on who is to get the opportunity to develop the cable network in the rights area. This will take place on the basis of an announcement and an assessment of costs and quality for the various bids.

The new resolutions imply that the Telecommunications Agency is to be in charge of development of the long-distance and, in the main, of the local network, too.

It is primarily the subscription networks, which means the stretch from the terminal exchange out to each subscriber in the telephone network, which will be open for competition.

The Telecommunications Agency will by virtue of the new rules have an opportunity to compete on an equal footing with private companies for development of the subscription network. The extent of the Telecommunications Agency's activity will be decided by the extent of appropriations. In addition, there is the distinct assumption that such development will take place with requirements for complete coverage of costs for each individual construction project and on the basis of approved estimating principles and accounting concepts, looking after this consideration.

#### Not Easy to Guarantee Equal Competition

"A dream package for the Telecommunications Agency." This characterization of the vote to let the "elephant" into the cable TV arena comes from Antenna Installers Group (AIG) Chairman Tom Lauten. "They say that these are to be provisional regulations. But we must certainly face the fact that the decision that the Telecommunications Agency is now to enter the competition with private cable TV companies will be a final decision," AIG Secretary Narve Bermann says.

Neither Bermann nor Lauten is familiar with to what extent the Transport and Communications Ministry has considered the comments which have been brought forth regarding the draft of the regulations. For this reason they are anticipating the contents of the report.

"Generally speaking, the industry is open to competition with the Telecommunications Agency, although we think that it will be difficult to guarantee equal competition terms as long as we have to compete with a State firm," Tom Lauten says. To the question of whether he thinks the industry will be able to handle competition with the Telecommunications Agency, the Antenna Installers Group chairman answers optimistically, "I think there are sufficiently many large serious companies which have sufficient competence to enter competition with the Telecommunications Agency that this will not be any problem."

Media Researcher Jan Henrik Nyheim does not look optimistically at the fact that the Transport and Communications Ministry has given the Telecommunications Agency the green light, or a "foot in the door," as he himself chooses to call it.

"The Transport and Communications Ministry is now following up the earlier telematics report, where it states indirectly that the Telecommunications Agency ought to take over control of further cable TV development."

"While the development in Europe otherwise has gone against increased private involvement in this field, the trend here at home is returning to heavy public involvement, lightly disguised as technical administration and supervision of further development. Cable TV development is a costly and capital-intensive industry. And from the business economics viewpoint, private companies have

little to be happy about now that the Telecommunications Agency is being allowed to enter the competition," Jan Henrik Nyheim believes.

"I am afraid these provisional regulations will be one more nail driven into private involvement in the cable TV business here at home."

#### Increased Local Radio Broadcasting

Oslo AFTENPOSTEN in Norwegian 4 Jun 84 p 5

[Article by Odd Inge Skjaevesland: "Langslet Will Increase Pace: Norwegians to Get More Local Broadcasting"]

[Text] As of 1 September of this year media development will reach its climax for the time being. Never have Norwegians had so great an offering on local radio, cable television and satellite broadcasts and seldom has anything changed so quickly in policy as the media situation after the change in government in the fall of 1981. "We have taken the leap from a firmly locked and immovable situation to development at an increasing pace," Culture Minister Lars Roar Langslet tells AFTENPOSTEN.

He believes that the protests regarding the amateurs' entrance march and poor quality have now ceased. We have more talented people than the skeptics would have exist, Langslet stresses.

When the application deadline recently expired, 750 applications for test broadcasts for local radio, cable TV and satellite broadcasts had arrived at the ministry. Permits will be given toward the end of August and be in effect as of 1 September. The ministry will pick out various test areas, divided into several regions in all counties. The goal is to achieve great variation in the form of organization and program profile.

Langslet wants to avoid a monopoly for newspapers and political parties which have applied for rights and intends that all the newspapers and parties of a region will be offered to participate, even though they have not applied.

"And the cable network in the area must be given an equal opportunity to relay satellite broadcasts," the cabinet minister emphasizes.

Today rights have been given to companies in six areas for relaying satellite broadcasts from the British Sky Channel. The Storting has consented to new rights being given to three areas in West Norway and North Norway. In addition, companies in Oslo and Stavanger have received permission to relay French satellite broadcasts.

In addition, Langslet points out that Scandinavian TV collaboration will be carried further through TELE-X and NORDSAT. And he maintains that Svalbard and the oil installations will receive television broadcasts.

[Question] Will it not be difficult to find enough creators of programs in such a small country as ours?

[Answer] "Today broadcasting capabilities are growing far more than program production. This is a challenge to individuals and groups with talent and push. Not least, realistic forms of financing are required. Settlement of the advertising question can become very important for this, too."

Langslet thinks there is a need for more educational offerings for those who want to work in broadcasting media outside of NRK [Norwegian Broadcasting Service]. The country's only higher educational institution for journalists has no television studio, but instruction in radio and television is given at Volda District Technical School. The authorities have no concrete plans to expand these educational offerings. The culture minister figures that the exchange between NRK and other broadcasting companies will increase.

A number of NRK technicians and camera people will be "bought up" by new independent private companies. At the same time, the culture minister is appealing to foreign radio and television studios.

Langslet believes that he has achieved much more than he had counted on when he became culture minister a good two and a half years ago. But is the quality on a par with how good broadcasting really ought to be carried out?

"Well, it is not my job to be a judge of quality. But I have the impression that both local radio stations and cable television have achieved a high standard in a surprisingly short time."

[Question] Are you sure that increased competition will produce better programs, more varied offerings and better programming directors?

[Answer] "Yes. For the time being we see this mostly on the local level. Later, higher ambitions will produce new opportunities for practicing artists, filmmakers and video producers."

Many claim that paying broadcasts are possible only if entertainment programs which people most want to have are broadcast. With this the /variety/ [in italics] of program offerings will not be greater, even though there will be more channels to choose from. Langslet denies this categorically:

"This is a typical American observation, which is no longer correct even in the USA, and it is even less pertinent to Norway," the cabinet minister says.

He points out, in addition, that it cannot be a threat if local radio receives an opportunity to use advertising.

"It is difficult to accomplish satisfactory financing without access to advertising, both in local radio and television. By upholding the ban on advertising it can become the case that only amateurs and well-off groups will be able to afford to keep it going," he emphasizes.

NORWAY

# NORWEGIAN BROADCASTING COMPANY REJECTS ECS PARTICIPATION

Oslo AFTENPOSTEN in Norwegian 22 May 84 p 3

[Article by Morten Malmo]

[Text The head of the Norwegian Broadcasting Corporation [NRK], Bjartmar Gjerde, does not want NRK to use the ECS 2 satellite to transmit TV programs to Svalbard and the oil installations on the continental shelf. Gjerde's rejection is based on the argument that in such a plan NRK would not be able to send TV broadcasts during the entire day. Instead Gjerde says that transmissions to Svalbard and the shelf can occur via the Intelsat IV satellite system.

This information, which appeared in a letter from Gjerde to Cultural Affairs Minister Lars Roar Langslet, was presented yesterday to Storting's Communications Committee. The new information appeared at the last minute, because yesterday Storting was going to give the go-ahead for Norwegian leasing of transmission capacity on the ECS satellite. Therefore the matter had to be withdrawn for new discussions by the Communications Committee. The plan Storting was supposed to approve yesterday would only have allowed NRK to send TV broadcasts to Svalbard and the oil installations on the shelf between 6 pm and midnight Monday through Friday and between 8 am and midnight on Saturday and Sunday. Broadcasting chief Gjerde wrote:

"It is unacceptable for NRK that programs cannot be broadcast in the morning. This involves children's television programs and educational broadcasts. In addition there are broadcasts of major events of general interest, including sports broadcasts, debates in Storting, etc. Limiting transmission to evening hours means that a full range of programming will not be offered."

In his letter Gjerde also said that in the discussions that took place with the Ministry of Cultural Affairs and the Teledirectorate, NRK had clearly expressed its view, namely that NRK is only interested in an ECS plan if a channel is made available 24 hours a day. Gjerde also wrote this: "NRK understood earlier that the Cultural Affairs Ministry shared NRK's view of the capacity NRK should have in ECS."

The broadcasting chief does not want to eliminate transmissions to Svalbard and the continental shelf, but points out that there is an alternative to the ECS satellite as far as NRK is concerned, namely the Intelsat IV satellite. This system is already in operation and is used to transmit telecommunications to and from the installations on the shelf and to Svalbard. Using Intelsat IV instead of ECS 2 would not increase NRK's costs, Gjerde also wrote.

Yesterday the Storting Communications Committee had a meeting with Cultural Affairs Minister Lars Roar Langslet and Communications Minister Johan J. Jakobsen concerning Gjerde's letter. Today or tomorrow the committee will receive the views of the two ministries involved on the matter and on Gjerde's letter. The Communications Committee will probably have to submit its recommendation this week if Storting is to discuss the matter before it recesses.

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NORWAY

# FIRM EXPORTING BUILDING EXCHANGES DEVELOPED DOMESTICALLY

Oslo AFTENPOSTEN in Norwegian 5 Jun 84 p 17

[Article by Ulf Peter Hellstrom]

[Text] The Standard Telephone and Cable Factory (STK) is about to make an international breakthrough with its Norwegian-developed digital interoffice telephone exchanges. In stiff competition with other suppliers the company landed a contract to deliver a building exchange to the East Asian Development Bank in Manila, the Philippines. "We expect this exchange to give us a foothold in a rapidly expanding market which can lead to many contracts worth millions to STK throughout the 1980's," said STK director Gunnar Tidemann.

The Norwegian cable and telecommunications company is proud of its digital interoffice exchange, especially because it was developed in Norway in co-operation with research people in Oslo and Trondheim. STK also says this may involve the biggest electronics project ever carried out in Norway, since development of the exchange cost somewhere around 100 million kroner.

The contract with the East Asian Development Bank in Manila involves an interoffice exchange for up to 2,500 lines. In the past STK has delivered the same type of interoffice exchange to big customers like General Motors in Belgium and Norwegian companies like Statoil.

STK has between 300 and 350 engineers and other technical experts working on research and development for the company at all times. A good third of them worked for some time on projects connected with the digital building exchange. "The whole project is based on a fundamental decision we made to develop advanced international technology in an area where it is vital to get in ahead of the big foreign competitors," Tidemann said.

The STK digital interoffice exchange was the result of a cooperative effort with the Defense Research Institute (FFI) and the Computer Center in Trondheim. The system contains a varying number of junctions. When telephone traffic is heavy the system itself finds the circuits that are open. This "junction technology" makes it possible to build up big nationwide

communications networks for big companies and organizations that are not gathered in one geographical location.

The first exchanges of this type have now been installed. One of STK's customers is the Norwegian National Broadcasting Corporation which uses an interoffice exchange to connect district offices in one network. FFI has a system in use, as does Statoil. The armed forces also use STK exchanges. But STK regards the big system that will now be delivered to Manila as the ultimate international breakthrough for this Norwegian digital technology.

"One of the advantages of the new interoffice exchange is that it is built of modules which means that the system can be adapted to different needs and sizes. This provides a flexibility in communications that is an advantage for companies that are developing rapidly. The exchanges in the system are built up around local computer power with microprocessors serving as pivots. The circuit cards include integrated circuits on a large scale--known as VLSI [expansion unknown] circuits--which were also developed by STK," Tidemann said.

This new technology also makes it possible for subscribers to keep their old telephone numbers even if they move from one office to another. As long as the system is informed of your whereabouts, it will take care of locating you by itself. This can be an advantage in a selection system.

The digital technology means that in principle different types of information--such as speech, pictures, text and data--can be transmitted over the network. The quality and capacity of the telephone cables determine how much information the network can handle at one time. High-speed transmission of information will not be common before the long-distance network is remodeled for digital transmissions.

According to Tidemann the digital interoffice exchanges will be a step in the concern's restructuring efforts in the 1980's. The merger of computer and telecommunications technologies offers great opportunities for expansion for suppliers with an insight into technical communications. In addition STK wants to strengthen its position on the terminal and pure data processing side. The purchase of the Data-Inform Company recently enters in here. In the future, telematic services can create new markets for the firm. "We anticipate a lot of growth in such industrial areas in the years ahead. Our goal is to offer total system solutions to our customers" said Tidemann.

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NORWAY

BRIEFS

NORDIC MOBILE PHONE NETWORK ORDER--Magnetic, Inc. has received an order worth 95.5 million Swedish kronor for the basic station equipment for construction of the Nordic Mobile Telephone system, NMT, in Sweden, Norway and Denmark. The order includes roughly 2,000 basic radio stations and the equipment is scheduled for delivery in 1985-86. Today NMT has 100,000 subscribers in the four Nordic lands and is the largest system of its kind that is in operation anywhere in the world. [Text] [Oslo AFTENPOSTEN in Norwegian 22 May 84 p 21] 6578

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